COLOMBIAN TUBER BEARING SOLANUMS IN THE CONICIBACCATA SERIES

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In recent years several tuber-bearing Solanums have been added to the Colombian flora (C. Ochoa: in Biota Vol. 11 Nr. 90:221-223, 1978 and in Phytologia Vol. 46 Nr. 7:495-497, 1980). At the present time I would recognize the following species for the country: Series Juglandifolia: Solanum juglandifolium Dun., S. ochranthum Dun. Series Conicibaccata: S. colombianum Dun., S. cacetanum Ochoa, S. flahaultii Bitt., S. garcia barrigae Ochoa, S. moscopanum Hawkes, S. orocense Ochoa, S. sucubunense Ochoa and S. cuatrecasasii Ochoa proposed here as a new species. Series Tuberosa: Solanum andreanum Baker and S. lobbianum Bitt. Series Piurana: Solanum tuquerrense Hawkes.

Both, Solanum flahaultii from Colombia and the Peruvian species S. dolichocremastrum Bitt. have erroneusly been considered by Hawkes (Annual Report, Scottish Plant Breeding Station Record, 1963, p. 111) to be synonymous with the Ecuadorian species S. paucijugum. However, these three species are quite different, as already shown by Correll (The Potato and its wild relatives, 1962, pp. 188-193 and 326-328). Solanum flahaultii has small anthers, a small calyx, a long light green conic fruit with an acute apex, while S. dolichocremastrum has larger anthers and calyx, round or globose fruit, as well as a peculiar leaf shape which distinguishes the species as a member of series Megistacroloba. Moreover, according to the counts I have made, S. flahaultii has 2n=4x=48 chromosomes while S. dolichocremastrum has only 2n=2x=24 chromosomes

Other diferences between Solanum paucijugum and S. flahaultii are also striking. In S. paucijugum the leaves have 5-7(-9) leaflets with several interstitial leaflets and the pedicel is articulated near the middle of its length. Also the fruit is ovoid, apically obtuse and green with darker green blotches. In contrast, S. flahaultii has leaves with 3-5(-7) leaflets with zero to 3 interstitial leaflets and pedicel articulation near the calyx, far above the middle of its length.

In addition, the Ecuadorian species Solanum pichinchense Bitt. et Sodiro, should not be considered synonymous with the Colombian S. andreanum, as Hawkes has already pointed out (op. cit. p. 140). S. pichinchense belongs to the series Conicibaccata and has 2n=4x=48 chromosomes, while S. andreanum belongs to the series Tuberosa and has 2n=2x=24 chromosomes. Obviously the species differ in morphology and should be maintained separate.

The following new tuber-bearing species is described here:

SOLANUM CUATRECASASII Ochoa, sp. nov.

Herbaceum, tuberiferum, 40-50 cm vel plus altum. Caules simplice vel ramificati, ad basim 3-4 mm crassi, glabri vel sparsé pilis obtecti, anguste alati, alae rectae, internodia 6-10 cm longa. Folia imparipinnata, paucidissecta, bijuga, foliola interjecta nulla. Foliola 6.0-9.0 x 5.0-7.0 cm usque ad 16.5-20.0 x 12.0-13.0 cm: petioli 7 cm vel plus longi, glabri. Foliola late elliptico-lanceolata, conspicue acuminata, supra sparsim pilosa vel glabrescentia, subtus glabra. Foliolum terminale lateralibus paulo majus 5.5-9.5 x 2.1-4.0 cm apice apice longe acuminatum, basi cuneatum. Foliola primi jugis 6.8-7.5 x 2.8-3.0 cm basi rotundata vel modice oblicua petioluli usque ad 6 mm longi; foliola secundi jugis 4.5-5.3 x 1.2-2.0 cm, petiolulus usque ad 8 mm longus. Folia pseudo stipulacea anguste falcata, subfalcata vel asymmetrice elliptico-lanceolata, perangusta, 5-8 x 1.5-2.5 mm. Inflorescentia nunc terminalis, nunc lateralis, cymosa vel cymosa paniculata, 4-7 flora· pedunculus 6 cm longus, ad basim 1 mm crassus, glabrus tamquam pedicelli et calyx: pedicelli in medium vel paulo subtus articulati, pedicellus inferior 7-8 mm longus, superior 8-9 mm longus. Calyx 4.0-4.5 mm longus, lobi anguste elliptico-lanceolati, acuminati, acumina peranguste acuta, fere filiformia, 1 mm vel plus longa. Corolla rotata vel subpentagona, lilacina vel albida, 2.0-2.5 cm diam., antherae basi cordatae, anguste lanceolatae 4 mm longae, filamente plus minusve 1 mm longa, albo-hyalina, sparse pilosa· stylus filiformis, 7 mm longus, 1.0-1.5 mm exsertus, usque ad 1/3 altitudinis sparse papillosus: stigma parvum, ovale, styli apice manifeste paulo crassius. Ovarium longum, conicum. Frutus longi conici 2.0-2.5 cm longi, basi 0.7-1.2 cm crassi, apice acuti. Species ad seriem Conicibaccata pertinet

HOLOTYPUS: US, National Herbarium Nr. 2339630.

ISOTYPUS: Herbarium Ochoanum.

COLOMBIA: Magdalena, Sierra de Perija, eastern of Manaure, from Floridablanca to El Cinco, 2600 m alt. Coll.: J. Cuatrecasas

and R. Romero Castaneda Nr. 25279, Nov. 13, 1959.

I name this species in honor of Dr. Jose Cuatrecasas. His outstanding contributions to the South American flora will always be permanent landmarks in the botanical science.

Key for the Colombian Conicibaccata series

1. Plants warf, less than 15 cm in height, rosette type at the base ..... S. garcia-barrigae
1. Plants erect or scandent more than 0. 30 m to near 2 m in height not rosette type at the base.
2. Flowers small, usually 15-25 mm in diameter rarely up to 30 mm. Articulation of the pedicel near its middle, slightly above or slightly below the middle.
3. Corolla rotate or rotate pentagonal but not appearing to be 10-lobulate, varying in color.
4. Flowers white tinged with blue, mauve or light purple.
5. Leaves with 7-9 leaflets and several interstitial leaflets, sessile or shortly petiolulate..... ..... S. colombianum.
5 Leaves with 3-5 leaflets, no interstitial leaflets, strikingly petiolulate ..... S. cuatrecasasii
4. Flowers pure white, never tinged.
6. Leaves subcoriaceus, sparsely pilose, 9-11 leaflets, largely petiolulate. Leaflets elliptic-lanceolate, apex acute or shortly acuminate..... ..... S. cacetanum.
6. Leaves soft, velutinous: 7-9 leaflets subsessils. leaflets very narrowly elliptic-lanceolate, apex conspicuosly acuminate .... S. orocense.
3. Corolla rotate-pentagonal appearing to be 10-lobulate, always blue. ..... S. moscopanum
2. Flowers larger, usually more than 30 mm in diameter. Articulation of the pedicel well above its middle commonly within 5-7 mm of the calyx.
7. Plants finely pubescent throughout. Leaves with 3-5 leaflets. Terminal leaflet much larger than the lateral ones, elliptic-lanceolate.
8. Anthers elliptic-lanceolate, short 3-4 mm long ..... S. flahaultii
8. Anthers narrowly lanceolate, larger,

5-6 mm long..... S. sucubunense

7. Plants sparsely pubescent. Leaves with 5-7 leaflets. Terminal leaflet slightly larger than the lateral ones, broadly elliptic to suborbicular ..... S. sucubunense